

IS TURKISH ELECTORATE HOMOECONOMICUS?

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Introduction

The likely impact of economic variables on political decision making has been the subject matter of a large volume of scholarly research for both the US and many other countries¹. Although it has been anecdotally recognized that the economic issues tend to occupy a significant portion of the political debate in at least politically stable economies, the empirical evidence together with a consistent theory seems to be hard to come by. In other words, most of the literature argues that voters are not indifferent to economic policies. And politicians are aware of that. But an empirically testable theory agreed upon by the researchers in the field is yet to come.

In this paper, we investigate the economic behavior of the Turkish electorate, who are the self-interested voters, in casting their votes during elections with the help of a simple comparison exercise based on measurable macroeconomic variables, which indicate the welfare of the voters. We also test several other relevant hypotheses such as voter myopia, and government intermingling with the upcoming elections. We postulate that the electorate may prefer to look at several criteria in making their decisions such as comparing the current welfare level to the previous period's welfare, or to the initial welfare level which prevailed in the first year of the government, or to an average welfare level, or comparing the average welfare level to the initial welfare level.

The participants of the political process make their decision based on their wellbeing during the reign of the government in power on the voter side. If the electorate are "no worse off" in the election year than before, they will cast their vote in favor of the government, or else they will choose an opposition party.

Additionally, if the electorate choose a party based on a comparison of final (election year) welfare level to that of the previous year, this would indicate that the electorate have a short memory. Behavior compatible with other criteria outlined below is considered as a sign of a longer voter memory.

By using data on election results and various real income variables between 1950 and 1991, we show that the criteria we develop can predict the outcome of all elections. In the remainder of the paper, we lay out the theoretical underpinnings of the economic criteria possibly to be employed in making decisions in the political process as well as the politicians behavior. Then follow sections which include a discussion on the empirical methods, and a brief discussion on the data. We present our findings before concluding our research in the last section.

The Theoretical Model

We model the Turkish elections as a two-choice phenomenon, that is, the voter can vote for the incumbent party (the sitting government) or the opposition party. Given that usually only one of the two major political parties won the majority of the electoral vote cast, it is a reasonable assumption to think that the race is between two significant choices when it comes to elections: Vote for the incumbent party or put the alternative party to the office. Other than the military coup periods, it is usually the same parties that run for the elections throughout the sample period considered in this study. Even soon after the impact of the military rule came to an end, the same old parties reemerged under different names, but under the leadership of the same (or like-minded) politicians. A similar modeling is Fair (1978) paper in which the US presidential elections is laid out as a binomial decision variable.

One of the common features of almost all election papers is a voting behavior function, which is a function of certain explanatory variables. As in Fair (1978), we postulate the behavior of the *self-interested* i th voter at elections held at time t , V_{it} , as

$$V_{it} = \begin{cases} 1 & \text{if } U_{it}^O < U_{it}^G \\ 0 & \text{if } U_{it}^O > U_{it}^G \end{cases} \quad (1)$$

where U_{it}^O (U_{it}^G) represents the expected future utility of the i th voter if the opposition (incumbent party, i.e. the sitting government) wins². Hence, the voter casts his or her vote for the incumbent party if that party is expected to provide him or her with a larger benefit for the upcoming period in which the elected party will hold the office. The incumbent party wins the right to stay in the office after the elections if the total number of votes cast in its favor is larger than the votes cast for the opposition.

The other important feature of the models in the literature is the way the expectations are formed. Some of the studies assume that the voters are fully informed while some others assume the possibility of less than perfect information being existent among the voters regarding the understanding of the policies of the government (or opposition parties/candidates). The political promises made by the candidates also make the environment more cloudy. That is because all the parties running for elections promise a bright future if elected. This increases the information cost when information is needed the most, i.e. the time of elections. The brightness, however, may be stated in terms of less unemployment rate, lower inflation rate and/or higher income levels, which are all observable at the end of the office term.

We assume that the voter uses an empirically observable criterion such as employment or inflation rates to gauge the success of the incumbent party. The choice of

the criterion from among the observable economic variables mitigates the information problem. This assumption is line with the so-called *Responsibility Hypothesis*, which argues that the voters hold the government responsible for the economic development. Even if people do not know/understand the economic policies, they do care about economic conditions. The argument agrees with the theory of rational political behavior as in Down (1957), in which the voter maximizes a utility function broadly defined.

Our voter has rational expectations rather than the adaptive ones even if he or she basis his or her decisions on the past performances of the government/candidate. Because the voter immediately corrects his/her errors committed in the previous election time rather than gradually learns from his or her mistakes. Our model mimics the behavior of the voter represented in Stigler (1973) and Kramer (1971)'s first model. Kramer (1971) also models the behavior of the voter who has less than perfect information, but uses relatively recent information about the government actions to gauge the performance success. Other than the comparison time is concerned, our model can be adjusted to comply with that modeling, too.

Given the discussion above, we assume that our voter prefers to vote for the incumbent party, $V_{it}=1$, at elections held at time t if that party/candidate seemed to have improved the well-being of the voter in question. An improvement in the past is construed to be an evidence for the capacity of the incumbent; hence it constitutes a reason to vote for the sitting government. Under these circumstances the voter behavior function is revised in the following way³:

$$V_{it} = \begin{cases} 1 & \text{if } W_{is} < W_{it} \\ 0 & \text{if } W_{is} > W_{it} \end{cases} \quad (2)$$

where W_{ij} is the welfare of the i th voter at time j . Also notice that $s < t$, that is, the voter compares his or her current welfare, which is measured in some economic standards, to his or her previous welfare. The current government, which is running for elections at time t , has been in the office for as long as no longer than $t-s$. In the spirit of the marginal analysis, we assume that the welfare function is twice continuously differentiable and strictly concave. This implies that the so-called *less fortunate* would be easier to please with smaller favors compared to the more well-to-do members of the electorate. Also assuming that the political establishment knows this information, and given the fact that a larger portion of the population is among the less fortunate, it pays to play to the hands of the mass majority for the political parties, more so for the party in power, to influence the election results.

We characterize the welfare criterion as a function of real income, i.e. $W=W(Y/P)$, where Y stands for the nominal income and P for the average price level. Under fairly general conditions, it is possible to generate a welfare function as specified above derived from a utility maximizing economic agent's problem within the general equilibrium sense. Then the welfare function can be a counterpart of the indirect utility function expressed in terms of decision variables. This implies that the yardstick used in measuring the government's performance is a function of the ratio of the levels of the economic variables.

The literature is also in disagreement as to how to enter an economic variable into an empirical estimation model, though most of it considers a version of real income, GDP growth rate, inflation level, or a combination thereof as possible formats. Even though we agree that it may make a difference within the econometric estimation framework, the

level of an economic variable and its rate of change basically provide the same information *given* an initial level of the variable in question since

$$\begin{aligned} W(Y_t/P_t) &= W[(Y_{t-1}/P_{t-1})\{(1+g_y)/(1+g_p)\}] \\ &= W[(Y_{t-1}/P_{t-1})\{-g_{unemp}/(1+g_p)\}] \end{aligned} \quad (3)$$

where g_y refers to the growth rate of nominal income, g_p the inflation rate and g_{unemp} to the unemployment growth rate. Given the functional characteristics of the welfare function, it is clear that a higher income growth rate is desirable while increases in inflation and unemployment rates are not, *ceteris paribus*. In other words, the higher level of real income is compatible with lower levels of unemployment or inflation rates, or with higher level of real income growth rate.

Kramer's second model as well as many other studies assume that voters have short memories, a phenomenon known as voter's myopia. Because the average voter does not invest much time into understanding/finding out government policies and their impacts on economic events. That is why, recent events play a greater role in determining as to where one would vote. One of the probable culprits which leads to the conclusion of the existence of myopic voters in many studies can be attributed to the inaccurate estimation techniques⁴ due to, mainly, the measurement problems associated with the way voter expectations are formed, and entered into the empirical analyses. In practice, most of the research such as Burn and Mitchell (1946), Goodhart and Bhansali (1970), Miller and Mackie (1973) is carried out in some sense of autoregressive processes. In a recent study, Khemani (?) finds that a model which assumes voter's myopia is inconsistent with the empirical findings within the context of India's state elections, where quite a few of *technically* uninformed voters participate. Likewise, Panzer and

Paredes (1991) find that the Chilean voters have “good memory” in remembering the past when they go to the elections.

In this research, we look at several criteria along different time horizons preceding the current elections, i.e. elections held at time t . The test for voter myopia in our study can be stated as follows: If the electorate chooses a party based on a comparison of the current (election year) welfare level to that of the previous year, this would indicate that the electorate has a short memory (myopic voters). On the other hand, the behavior compatible with other criteria is considered as the sign of a longer voter memory.

Before we close the theoretical section, the last but not the least point to mention is the role of the government in trying to influence the election results in its own favor. This is so because the opportunistic policy makers try to maximize their popularity or probability of reelection by implementing the populist policies as in Nordhaus (1975), Lindbeck (1976), Cukierman and Meltzler (1986), Rogoff and Sibert (1988), Rogoff (1990), Persson and Tabellini (1990). This is called (*Rationalistic*) *Opportunistic Policy Maker Behavior*. In this line of research, the politician is assumed to do all he or she can to win the elections with no principals to stick with. Nordhaus (1975) summarizes the Political Business Cycle produced by the opportunistic policy maker as: pre-electoral high growth and low unemployment, increasing inflation around the election time and post-election recession, regardless of the political orientation of the incumbent party⁵. Rosenberg (1992) shows that the opportunistic politicians seeking reelection make a conscience effort, which is statistically significantly different from the effort of non-re-election seekers, to sway the public sentiments in his or her favor⁶.

The Empirical Methodology

No generality is lost by assuming that all voters have the same preference distribution; hence a representative voter may be used to illustrate the behavior of the whole electorate body. This simplifies the voter behavior equation to $V_t = V_{it}$ for an election held at time t . The representative voter may prefer to look at several criteria in making his or her voting decision. For example, comparing the current welfare level to the previous period's welfare; or to the initial welfare level which prevailed in the first year of the government; or to an average welfare level; or comparing the average welfare level to the initial welfare level.

The following notation will be helpful for the rest of the paper:

Welfare at the initial period: $W_0 = W(Y_0/P_0)$

Welfare at the current (election) year: $W_t = W(Y_t/P_t)$

Average welfare for a government reign: $W^* = \sum W(Y_t/P_t)/n$,

where n stands for the number of years the current government has been in power. W is the welfare function or some positive monotonic transformation of it.

The possible criteria to use in election decisions may be stated as follows⁷:

Criterion 1: If $W_t > W_0$, government wins, otherwise the opposition wins. This criterion assumes that the voters compare the economic level they started with the current government to where they ended during the reign of that government.

Criterion 2: If $W_t > W^*$, government wins, otherwise the opposition wins.

According to the postulate of this criterion, voters care about how well they fared during the reign of the sitting government on the average, irrespective of occasional bumps and hikes. Today (the current election year) is the reference point.

Criterion 3: If $W^* > W_0$, government wins, otherwise the opposition wins. Voters care about how well their economic welfare is improved during the reign of the government on the average, irrespective of occasional bumps and hikes. Where they started, i.e. the initial period in which the government was elected to power, is the reference point.

The simplest possible welfare function can be formed as a function of the (natural log) of (per capita) real income⁸.

We try to discover a common pattern in voting behavior, if any, among the Turkish electorate. As stated earlier, if the electorate chooses a party based on a comparison of the time t welfare level to that of the previous year, this would indicate the myopic characteristic of the electorate, otherwise the electorate is considered to show the behavior compatible with a longer memory.

The impact of the party being in power to the elections is tried to be observed by looking at the average real income levels in years preceding and following the elections.

As alluded to above in the Introduction section, several studies attempt to do certain econometric analyses such as ordinary least squares. We, however, prefer not to resort to this practice since the short sample size would undoubtedly affect our findings.

Data and Data Sources

The data set for the study is constructed by variables that are collected from different sources. Real gross domestic product values are taken from the Penn World Table (Summers et. al.). We use three different real income concepts, namely, the Real GDP per capita in constant dollars (Chain Index), (RGDPCH), which is expressed in international prices for the base year of 1985; the Real GDP per capita (Laspeyres index),

(RGDPL), which is also in 1985 international prices; and the Real GDP per capita in constant dollars adjusted for changes in terms of trade, (RGDPTT). The last income concept is expressed in 1985 international prices for domestic absorption and current prices for exports and imports. All three real income variables can be employed in constructing the criteria mentioned above since all are very closely related to each other. This fact is established in Figure 1. Figure 2 shows the growth rates of all the income concepts, which also supports the idea of substitutability among the variables in question for our analytical purposes.

Election dates and winners of the election data are obtained from Statistical Indicator of Turkey 1923-1995 of State Institute of Statistics, SIS, and the information on government in power are obtained from the web page of Turkish Grand National Assembly at www.tbmm.gov.tr. The sample range starts with the data in 1950, which is the year in which the multiparty political party system is introduced into the Turkish politics. The ending date of the sample is mostly imposed by the availability (or better to say, the unavailability) of some data.

The coalition governments are identified by the major coalition partner in the government. In one case, the military government led by Uluşu in the period of 1981-1983 is assumed to be the predecessor of the Ozal government since Ozal himself was the main person in control of the economic policy of the military government. Military governments which are mentioned as *Others* in Table 1 are not elected by the people, but rather appointed by the military coup leaders until democracy is restored in the country. For rather political reasons, though, we assume that the military governments led by Erim and Talu between 1971 and 1973 were left-wing leaning administrations given the

political tendencies of the military leaders and the compositions of the bureaucrats in these interim governments.

Table 1 summarizes the reign period of all governments/parties in Turkey. All of the data set is presented in Table 2 regarding elections and the real income levels.

Average real income data as calculated from the values in Table 2 are presented in Table 3. These numbers alongside with the numbers from Table 2 can be used to gauge the validity of the second and third criteria mentioned above.

Findings

The most striking observation, perhaps on a side note, is the fact that the Turkish electorate are overwhelmingly right wing leaning. As Table 1 shows, about three fourths of the time during our coverage period is ruled by the right wing political parties.

Nevertheless, the governmental office seems to have alternated between the right and the left wing parties quite often. This is clearly a sign of the existence of a large number of voters who can switch sides depending on certain criteria. However, we do not have an evidence to suggest that the switches are mostly based on economic reasons rather than the political ones.

Criterion 1 results presented in Table 4 show that the voters acted as expected by our economic reasoning laid out above, where voters seemed to look at where they started and where they ended during the rule of a specific government. Other criteria are satisfied, as well⁹.

Voter myopia is another concern of the political economy literature. According to our criteria, the voters should not look at the year immediately before the election year in casting their votes, but rather at a larger picture. We think that at least the voters casting

their votes in favor of the opposition simply because of a less than satisfactory performance of the incumbent government in the year before elections would have a myopic view of the political system. Within the Turkish context, in election years of 1954, 1965 and 1991, the current welfare falls short of the welfare level attained in the previous year. If the voters had short memory, they would have voted against the sitting governments in those election years. However, the results (in Table 2) show that voters favored the party in power in spite of this factor, suggesting a longer memory phenomenon for the Turkish electorate.

In Table 5, we calculate the average growth rates of real income in years following the elections. We find that the average growth rates in the election year and second year after the election are around 2 percent. On the other hand, the average growth rates in the first year (right after the election) and third year (before the election) after the election are 6 and 3.6 percent respectively. We believe that these results may suggest that parties in power try to influence the voters to win the election.

Conclusions

In this paper, we outline a general theoretical framework, based mostly on Fair (1978), but may find its counterparts in quite a few other studies. The theory suggested certain empirically observable (and very simple) criteria to test several hypotheses which appeared in the political economy literature, specifically the responsibility hypothesis, voter's myopia and the possibility of the incumbent government's influence in the current elections.

We show that within the Turkish context for the period of 1950 to 1991, the comparisons of the levels of real income can predict all election results, suggesting the effect of the economic variables on the outcome of the Turkish politics.

Our experiments do not provide an evidence to conclude that the Turkish electorate are myopic. But we found some evidence to suggest the possibility of the incumbent governments' effort in influencing the election results to their favor.

The study can be extended in many directions. For example, the obvious direction should be conducting the research with a more frequent data set such as quarterly rather than annually to better measure the voter myopia as well as other claims made in this paper. A general equilibrium model would enrich the results of the paper. If the sample range if the data is extended, it may be possible to carry out some econometric exercises, too.

Table 1: Parties and the Periods in Office

Ruling Party	Position in the Political Spectrum	Periods in Power
Democrat Party (DP)	Right	1950-1960
CHP	Left	1961-1965 1973-1974 1978-1979
AP	Right	1966-1970 1975-1977 1980
ANAP	Right	1983-1991
Others	Left-Right	1971-1972 1981-1982

Table provides a short summary of parties in power associated with their periods in power in Turkey for the period of 1950-1991. We choose the 1950 as the beginning of the period since before that year Turkey was under one party regime. No election was hold before 1950.

Table 2: The Whole Data Set

year	election	government	election winner	RGDPCH	RGDPL	RGDPTT
<u>1950</u>	<u>election</u>	<u>menderes</u>	<u>dp</u>	<u>1065</u>	<u>1063</u>	<u>1105</u>
1951		menderes		1277	1266	1306
1952		menderes		1355	1343	1381
1953		menderes		1488	1478	1519
<u>1954</u>	<u>election</u>	<u>menderes</u>	<u>dp</u>	<u>1333</u>	<u>1333</u>	<u>1365</u>
1955		menderes		1442	1445	1471
1956		menderes		1423	1422	1448
<u>1957</u>	<u>election</u>	<u>menderes</u>	<u>dp</u>	<u>1674</u>	<u>1663</u>	<u>1707</u>
1958		menderes		1773	1760	1796
1959		menderes		1681	1676	1680
1960	<i>coup</i>	<i>menderes</i>		1622	1615	1657
<u>1961</u>	<u>election</u>	<u>inönü</u>	<u>chp</u>	<u>1631</u>	<u>1625</u>	<u>1664</u>
1962		inönü		1670	1663	1725
1963		inönü		1813	1806	1853
1964		inönü		1816	1810	1855
<u>1965</u>	<u>election</u>	<u>inönü</u>	<u>chp</u>	<u>1812</u>	<u>1806</u>	<u>1854</u>
1966		demirel		1989	1986	2041
1967		demirel		2018	2015	2067
1968		demirel		2109	2106	2160
<u>1969</u>	<u>election</u>	<u>demirel</u>	<u>ap</u>	<u>2163</u>	<u>2160</u>	<u>2214</u>
1970		demirel		2202	2202	2251
1971	<i>coup</i>	<i>erim</i>		2368	2368	2423
1972		erim		2463	2463	2536
<u>1973</u>	<u>election</u>	<u>talü</u>	<u>chp</u>	<u>2471</u>	<u>2472</u>	<u>2543</u>
1974		ecevit		2658	2661	2720
1975		demirel		2838	2840	2877
1976		demirel		3007	3010	3057
<u>1977</u>	<u>election</u>	<u>demirel</u>	<u>ap</u>	<u>3112</u>	<u>3113</u>	<u>3152</u>
1978		ecevit		3052	3055	3084
1979		ecevit		2955	2957	2981
1980	<i>coup</i>	<i>demirel</i>		2874	2872	2875
1981		ulusu		2858	2856	2848
1982		ulusu		2868	2867	2849
<u>1983</u>	<u>election</u>	<u>ulusu</u>	<u>anap</u>	<u>2909</u>	<u>2907</u>	<u>2884</u>
1984		ozal		3022	3022	3019
1985		ozal		3077	3077	3077
1986		ozal		3299	3299	3325
<u>1987</u>	<u>election</u>	<u>ozal</u>	<u>anap</u>	<u>3441</u>	<u>3441</u>	<u>3470</u>
1988		ozal		3419	3419	3456
1989		ozal		3411	3414	3414
1990		akbulut		3741	3743	3750
<u>1991</u>	<u>election</u>	<u>yılmaz</u>	<u>anap</u>	<u>3666</u>	<u>3676</u>	<u>3689</u>

coup refers to actual military overtake of the governmental duties or any military intervention.

Table 3: Average Real GDP Numbers in Election Years

Year	avRGDPCH	avRGDPL	avRGDPTT
1954	1303.6	1296.6	1335.2
1957	1513	1510	1542
1961	1676.75	1669	1699.25
1965	1777.75	1771.25	1821.75
1969	2069.75	2066.75	2120.5
1973	2376	2376.25	2438.25
1977	2985.667	2906	2951.5
1983	2878.333	2919	2920.167
1987	3209.75	3209.75	3222.75
1991	3559.25	3563	3577.25

The average income values are calculated from Table 2 GDP numbers, which are simple averages for the duration of the government from the time it ascended to power till the next election time.

Table 4: Predicting Election Results According to Criterion 1

Election Year	Welfare Comparison	Government Wins/Loses
1954	$W_{54} > W_{50}$	Wins
1957	$W_{57} > W_{54}$	Wins
1961	$W_{61} < W_{57}$	Loses
1965	$W_{65} > W_{61}$	Wins
1969	$W_{69} > W_{66}$	Wins
1973	$W_{73} > W_{71}$	Wins
1977	$W_{77} > W_{75}$	Wins
1983	$W_{83} > W_{81}$	Wins
1987	$W_{87} > W_{83}$	Wins
1991	$W_{91} > W_{87}$	Wins

Criterion 1: If $W_t > W_0$, government wins, otherwise the opposition wins. W_k where k is a year represents the welfare as measured by the real GDP in year k .

Table 5: Growth Rate of Real GDP

<u>Party</u>	<u>period</u>	<u>election</u>	<u>election +1</u>	<u>election +2</u>	<u>election +3</u>
DP	1950-1953		0.18153878	0.0592879	0.093631
	1954-1956	-0.1100009	0.078599	-0.0132637	
	1957-1960	0.16244865	0.05745706	-0.0532842	-0.03573
CHP	1961-1964	0.00553337	0.0236303	0.0821593	0.001653
	1965-	-0.0022051			
	1973-1974	0.00324281	0.07295103		
	1978-1979			-0.0194685	-0.0323
AP	1966-1968		0.09320079	0.0144749	0.044107
	1969-1970	0.02528225	0.01786989		
	1975-1976			0.0655256	0.057843
	1977	0.0343227			
ANAP	1983-1986	0.01419446	0.03810948	0.0180362	0.069664
	1987-1990	0.04214273	-0.006414	-0.0023426	0.092347
Average		0.0174961	0.06188248	0.0167917	0.036402

Observations

- Average growth rates in election year and second year after the election are around 2 percent.
- Average growth rates in first(right after election) and third year(before the election) after the election are 6 and 3.6 percent respectively.

These results may suggest that parties in power try to influence the voter to win the election.

Figure 1: Real Income Concepts in Levels

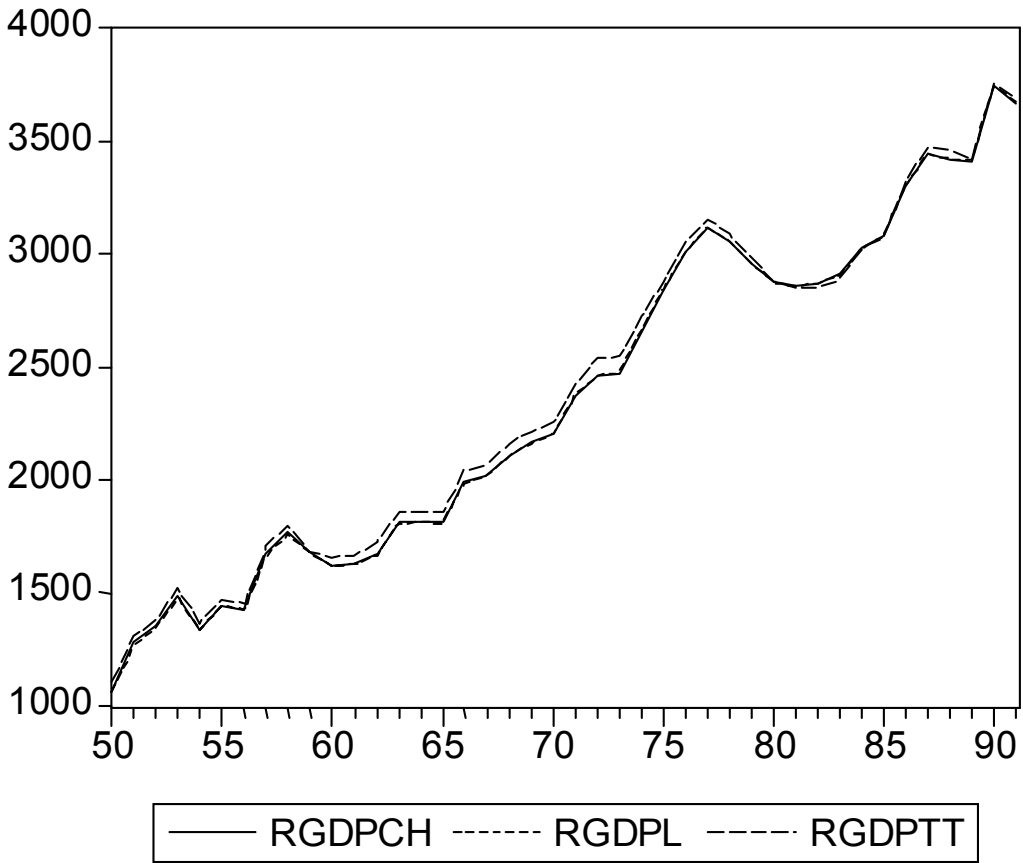
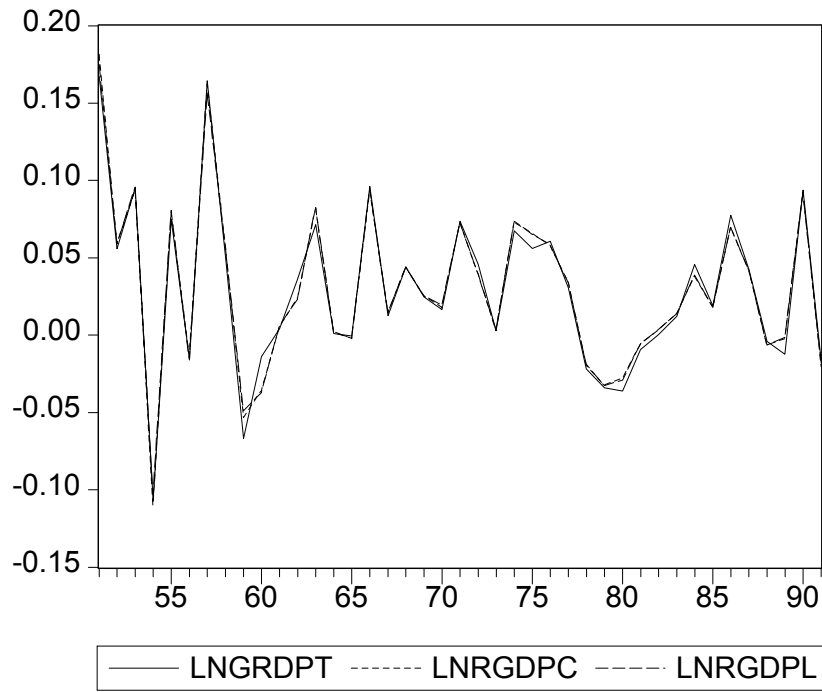


Figure 2: The Growth Rates of the Real Income Concepts



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ENDNOTES

¹ See among many others, also those mentioned in the rest of this paper, Austin (1996) for a study on Russia, Meltzer and Vellrath (1975) on USA, McCallum (1978), Khemani (?) on India, and Panzer and Paredes (1991) on Chile.

² As in Fair (1978), we assume that the equality is a trivial case, which causes no fundamental changes in the results obtained here. Fair assumes that these voters may simply abstain from voting.

³ We can also use equality in the first expression, which states that in case of no change in the well-being of the voter, he or she votes for the incumbent party. Alternatively, the voter may simply tosses a coin, and casts his or her vote according to its outcome.

⁴ See Frey and Schneider (1978) for a critique of the econometric techniques used in the political economy literature.

⁵ An alternative theory on modeling the political parties is called the *(Rationalistic) Partisan Policy Maker Behavior*, in which parties follow policies to the benefit of their own supporters as in Hibbs (77, 87), Alesina (87). Such models assume that leftist parties (governments) follow the anti-unemployment policies while rightists consider anti-inflation as the main enemy to combat.

⁶ Also see Enelow (1992) and Coughlin (1990) for modeling the behavior of the candidates who care about “what wins” rather than “who wins.”

⁷ The previous comments about equality apply here, too.

⁸ The positive monotonic transformations of this function would produce the same qualitative results.

⁹ The results are available upon request.